

## A NEW CYNIPID GALL IN VALONIA.

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Commercial shipments of valonia, the acorn cups of *Quercus aegilops*, often contain the acorns also. Most of the shipments come from Turkey with a few from Greece, Italy and Albania. They arrive in every month of the year, most frequently in the spring months, the shipments consisting of from a score to a few thousand bags, presumably of the previous year's crop.

When these shipments are examined at the port of entry (New York and occasionally Philadelphia) two kinds of cynipid galls are often found. One consists of from one to three stony-hard, many-celled masses inside the acorn beside the much reduced cotyledons. When placed in rearing cages out-of-doors on the ground near Washington, D. C., adults begin to emerge the second spring. Pupation takes place early in October and transformation to adults later in the month. The adults, all females, remain in the galls all winter and emerge the next spring from April 15 to May 8. The other larvae remain dormant to transform the next fall or even later so that the emergence is distributed over three or four seasons.

Gall and host agree with the description of *Andricus glandium* Giraud. His types are in Paris and I have compared these reared adults with one of his paratypes and concluded that they were the same species. Dalla Torre and Kieffer in 1910 in *Das Tierreich* 24:562 placed the species in *Callirhytis* and routine determinations for the Bureau have followed this usage. During the last ten years some 99 lots of these galls have been intercepted at quarantine and sent in for determination. Some were sent in liquid and some were too small to bother with placing in rearing. But adults have been obtained from 62 different lots and a tarsus has been removed from at least one individual of each lot, crushed under a cover glass and examined under a compound microscope. In every case the claw has been found to be toothed and the species should be retained in *Andricus* where Giraud placed it.

Father Dettmer in 1933 professed to find three species represented in the type material of *glandium* in Paris, basing his conclusions on slight differences in color and the structure of the claw but I find no statement in his paper or his correspondence that a tarsus was removed and mounted for study. Color depends somewhat on amount of exposure to light after emergence and also on climate. There is considerable variation in color in this reared Turkish material, adults that emerge the third and fourth spring being darker than those that emerged previously from the same lot of galls.

Measurements of 300 specimens from 30 lots range in length from 2.2-4.0 mm. Average 2.97 mm,

Some acorns contain galls of quite a different sort, being small, separable and from only a few to as many as 70 in a single acorn, much like those of *Callirhytis lapillula* Weld in *Quercus bicolor*. Transformation and emergence dates are the same as for *glandium* and the adults, all females, are superficially very similar to that species in color and sculpture, differing only in that the foveae are more sharply marked off from the disk of the scutellum and in the greater uniformity in the ridges radiating from the corners of the mouth. Adults have been reared from 44 out of 68 lots of this sort and at least one individual of each lot has been examined and in every case the claws have been found to be simple, which would place it in the genus *Callirhytis*. (Described below.)

***Callirhytis glandulosa*, n. sp.**

*Female*.—Head, thorax and base of abdomen dark amber; rest of abdomen, tip of antenna and mandible, foveae, mesosternum, metanotum and parts of propodeum fuscous to black. Head transverse, as broad as thorax, cheeks broadened behind eyes, malar space .4 eye, striate; antenna 14-segmented, lengths as (scape 16 (8) : 9 : 15 (5) : 12 : 11 : 11 : 11 : 11 : 10 (7) : 9 : 9 : 9 : 9 : 19 (6)). Sides of pronotum rugose. Mesonotum bare, with sharp, parallel, transverse ridges on a coriaceous ground, parapsidal grooves percurrent, median distinct only posteriorly. Disk of scutellum reticulate, pits dull, not smooth, bounded laterally. Carinae on propodeum straight, parallel. Mesopleura with a few parallel ridges across middle. Wing hyaline, pubescent, margin not ciliate, veins yellowish, first abscissa of radius angled, areolet reaching about one-sixth way to basal, median reaching basal. Abdomen as long as head plus thorax, length to height to width as 30 : 25 : 20. Lengths of tergites along dorsal curvature as 52 : 19 : 8 : 10 : 15 : 8; ventral spine in side view 2-3 times as long as broad, ovipositor sheaths projecting obliquely, a few scattered hairs on the sides of tergites II and VII. Claws simple. Using the width of the head as a base the length of mesonotum ratio is 1.2, antenna 2.0, wing 3.5, ovipositor 2.8. Length 1.9-3.35 mm. Average of 200 specimens from 15 lots 2.80 mm.

Close to *lapillula* which has smooth and shining pits, a shorter ventral spine and a median not reaching basal.

*Type*.—Cat. No. 52961 U. S. N. M. Type and 24 paratypes. Paratypes in Field and American museums; at Stanford, Harvard and Philadelphia Academy; in London, Berlin and Paris.

*Gall*.—Brown, seed-like, more or less tuberculate and angular cells tightly packed in alongside the reduced cotyledons of mature acorns. Length 3-5 mm.

*Host*.—*Quercus aegilops* L.

*Habitat*.—The type material is from Turkey, some of the paratypes from Greece. These galls have been received from Italy also.